LECTURE INTRODUCTORY

TO

A COURSE OF LECTURES

ON

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

BY

ALEXANDER R. SIMPSON, M.D.,

PROFESSOR OF MEDICINE AND MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN IN THE UNIVERSITY OF EDINBURGH.

EDINBURGH:
PRINTED BY OLIVER AND BOYD, TWEEDDALE COURT.

MDCCCLXX.

REPRINTED FROM THE EDINBURGH MEDICAL JOURNAL FOR DECEMBER 1870.

INTRODUCTORY LECTURE.

GENTLEMEN,—It is just thirty years since another took the place I am called on now to occupy. These thirty years have witnessed wondrous changes. Regions of the globe that had not been explored have been mapped out; nations and tribes that had before been isolated have been brought within the range of civilizing influences; the last fetters have been broken from the limbs of slaves; and shackles of the mind, more galling still, have happily been cast away. Science has been enlarging her boundaries on every side—reading many of nature's long-hidden secrets, sounding the depths of the ocean, and questioning the sun and stars as to their constitution until they have returned an answer. The railway, the cheapened postage, and the telegraph, have all the while been altering the conditions of social intercourse, so that those who were kept far apart in other days are brought together now, and what one man learns is soon the common property of multitudes. The science of the warrior has received the most astonishing development, and surely the sickening carnage on the fair fields of France tells this, if it tells anything, that the art of mutual destruction has nearly reached its culminating point. While thus on every hand progress was being made, it would have been a wonder if the science that has to do with the health of man, and the art that is devoted to the prolongation and protection of his life, should have remained behind. It has not done so. In every department of the science and art of medicine advances have been made, and not least in that which you and I are met to study and teach; and I have thought that it might prove a happy, heartsome task for us to-day briefly, very briefly, to glance at some of the principal achievements in the domain of Midwifery and the Diseases of Women that have been made during these thirty years.

MENSTRUATION—SPONTANEOUS OVULATION.

As we enter on the threshold of our subject, we are met by one of these advances. For, before the period at which our survey begins, the function which marks the transition from the girl to the

woman formed a waste whereon there grew a crop of wild hypotheses. Before 1840, indeed, one or two observers had pointed out that the ovaries had an important part to play in connexion with each monthly period, and had expressed the opinion that in them should be sought the *primum mobile* in the whole train of menstrual phenomena. But it was reserved for that and the early years of the following decennium to see the full investigations of the subject (which we mainly owe to France), and the final establishment of the theory that Menstruation depends upon the monthly ripening of a Graafian vesicle, and the discharge from it of a fully developed ovum. In a System of Midwifery (Campbell's), published here in 1843, the then recent explanation is curtly described and contemptuously discarded as a "fanciful hypothesis." Yet only a few years had passed ere the fanciful hypothesis was widely accepted as one of the most incontestable facts of physiology. The discovery of the connexion between Ovulation and the monthly flow does not, confessedly, explain all the phenomena of menstruation. The cause of its periodicity, for example, still awaits a satisfactory solution. But it has let in a flood of light sufficient to dispel a host of erroneous conceptions, and has shown us that the explanation which satisfied the writer to whom I have referred, as well as many others, from twenty-five to thirty years ago, falls far short of the truth when they regarded menstruation as a mere secretion "regulated by the same laws which influence other secretions."

It has done more,—it has led to the recognition of the ovaries as the central dominating organs of the whole female economy, whose general condition, both in health and disease, is modified in an infinite variety of ways by the changes, natural or morbid, which occur in them.

STRUCTURE OF THE OVARY.

That organs having such an important place in the body should have attracted the attention of many observers for many years was what you naturally would have expected, and what has actually taken place; and especially within the last ten years most interesting discoveries in regard to their structure and development have been made. Yet even here the terminus of microscopical discovery is hardly reached. For it is only in the course of the current year that a German physiologist has published a work containing a series of observations which will call for a revisal of the descriptions of the ovaries in all our present text-books. These researches I shall have to describe to you more in detail some days hence. Let it suffice meantime to state that they furnish proof that the organs are—what some had previously supposed they might be—genetically and histologically of the nature of mucous glands; and the ovum from which the new individual may under proper conditions be developed, is demonstrated to be simply a differentiated epithelial cell.

EMBRYOLOGY.

The changes which the ovum undergoes consequent on its fertilization had already been the subject of many interesting observations, and various important points in connexion with the early development of the embryo had been ascertained and established. But when I remind you that it was only in the year 1838 that the "Microscopical Investigations" of Schwann unfolded the doctrine that the cell was the all-important element of every animal, which he showed to be composed, like every plant, of a congeries of cells, you will understand how 1840, and the years that followed, should have been richly fruitful in researches that led to a clearer apprehension of processes that had already been observed, and the observation of changes up till then unsought for and unknown in this department of our science. Schwann's great generalization gave the like mighty impulse to Embryology which it gave to every other department of anatomy and physiology; and attention being now directed to cells and the cell elements, it was discovered that, as the germinal vesicle disappeared, an embryo cell took its place, which has to do with the cleavage of the yolk, and the subsequent development of those cell layers of which the blastodermic membrane is composed, and from which all the various tissues and organs and members are progressively developed, till out of a cell which cannot be distinguished by any power at our command from multitudes of cells precisely similar, there is at last evolved a being capable of independent existence, having features common to all the creatures of its kind, yet presenting individual traits which distinguish it from all the rest.

THE GRAVID UTERUS.

Ere these transformations have begun, the ovum has left the ovary in which it was produced to find a nidus in another organ, wherein a series of changes supervene, which have by many besides Swammerdam been reckoned a "miraculum naturæ." This Gravid Uterus will form one of our most engaging themes of study. The careful observations of Dr William Hunter, and his wonderfully correct representations, so true to nature, had set various important points regarding it in their proper light a century ago. One very important discovery he had made, viz. (I quote his own words), "that the internal membrane of the uterus, which I have named *decidua*, constitutes the exterior part of the *secundines* or afterbirth, and separates from the rest of the uterus every time that a woman either bears a child or suffers a miscarriage." This discovery, however, was not appreciated at the time. For many years false teachings in regard to it prevailed, and it was only within the last thirty years that the microscopical investigations of various anatomists confirmed Hunter's great discovery, and superadded further discoveries regarding the intimate composition of this membrane, and the transformations which it undergoes. With regard, moreover,

to the nature of the structure which makes up the main part of the thickness of the walls of the uterus, it was reserved for the same era of active microscopical research to demonstrate its muscular arrangement and to trace out the marvellous development of its individual fibres, as well as to lead to a clearer apprehension of the changes that take place in the nerves and bloodvessels of the organ.

It might have been expected that the great anatomists of a giant generation, which is passing all too rapidly away, should have worked out the mine so exhaustively that little would be left for after explorers to discover. But a remark made by William Hunter in the lecture from which I have quoted holds good here. Speaking of the wide and warm reception with which Harvey's doctrine regarding the circulation of the blood was welcomed, "it was imagined," he says, "that everything in physic would be explained. But time and experience have taught us that we still are, and probably must long continue to be, very ignorant, and that in the study of the human body and of its diseases there will always be an extensive field for the exercise of sagacity."

THE PLACENTA.

This holds good in a very special manner in regard to the structure and functions of the Placenta—the peculiar organ by means of which the fœtus is kept connected with the uterus. For, notwithstanding that the eyes of many of the most accurate observers and the minds of many of the most philosophical reasoners have been brought to bear upon it, its anatomy cannot yet be said to be perfectly made out; and only within the last twelve months, a series of processes have been described in it which had formerly been overlooked, formed of villi of the chorion that had not, like the others, been supplied with vessels, but that had got embedded in the substance of the decidua, apparently having it as their function to keep up the connexion between the fœtal and maternal portions, and sometimes becoming the point of departure for some of the morbid changes to which the placenta is liable. There are various points of no small importance in its anatomy which are subjects of dispute; and whilst physiologists are agreed as to the fact that the cells of the villi absorb the nutritive material for the growth of the fœtus from the maternal blood in which they bathe, the questions still await an answer, What are the specific substances which they absorb? and, What chemical changes do these substances undergo in the placental cells ere they pass into the current of the fœtal circulation? Still the increase to our knowledge during the past thirty years has been immense, and bears not only on the normal structure and functions of this organ, but on its pathological alterations. As it was not till the beginning of this period that the grand idea of a Cell-Pathology could be conceived, and as it was only after about a third of it had passed that the doctrine began to be promulgated which is yearly gaining fresh development, it will at

once appear that the explanations of many morbid phenomena which had long before been noted in the placenta, in the membranes of the ovum, in the decidual membrane, and in the embryo, had all to be revised and often to be rejected, whilst morbid processes which had formerly been overlooked were now observed and appreciated; and so an ever-growing light has been and is still being shed on the subject of intra-uterine disease and death of the fœtus, as well as on the subject of those diseases of the maternal organs which lead to its premature expulsion.

DISEASES OF PREGNANCY.

Chemistry has come to the aid of Histology in these researches, and by determining the changes which occur in the blood and the secretions of the pregnant woman, has led to a clearer understanding of her relationship to various febrile and other disorders. The nature of Eclampsia, *e.g.*, of which so many pregnant, parturient, and puerperal women die, and which in every case appears so appalling, has only during this era been shown to be dependent primarily on some impairment in the function of the kidneys. Whether this result from pre-existent disease, or whether, as is more frequently the case in primiparous women, it be due to interference with their action arising during the course of pregnancy, we know that whenever we detect albumen in the urine, the patient is liable to have some of the material which should have been excreted by the kidneys retained in the blood, and circulating there it becomes a poison which at any moment may light up the hideous train of symptoms with all their heartrending consequences. The profession has not learnt these things without having been able also in some degree to counteract the mischief, by using measures to eliminate the poison, or administering appropriate remedies to counteract its agency. Of those diseases which have only recently found a place in nosology, I might instance the Acute Yellow Atrophy of the Liver as one which has been noted for the comparative frequency with which it affects the pregnant female, and the fatality with which in her it is attended—a frequency and a fatality which are due to the altered condition of the blood peculiar to her state.

TERMINATION OF UTERO-GESTATION.

And now, supposing both the mother and the embryo within her womb to have escaped the many dangers to which they are exposed, there comes a period when they must be separated. How soon this period may naturally arrive, and how long it may naturally be deferred, and what we may regard as its normal date, are all points which have been greatly cleared up during these thirty years, although cases may arise in which no medical witness would even yet be entitled to swear to impossibilities. To another question, viz., Why does labour supervene at that particular term? most unsatisfactory answers had previously been given. But since the

true nature of the decidual membrane came to be fairly understood, it was natural to seek in the changes which it undergoes for an explanation of the cause of the occurrence of labour at the close of the ninth month of utero-gestation. The search has not been fruitless. For it has been found that in the natural course of development, the decidual membrane at this period has undergone a degree of fatty degeneration which has brought it to the last stage of its existence, when it would either require to be melted down and absorbed, or be thrown off as a foreign substance. The same change occurs in it at an earlier date if through some disease an end be put to the life of the fœtus, and in such a case expulsion of the dead child does not take place until time has been given for the degeneration to occur in the decidua, which leads to its being loosened from the uterine parietes and reduced to the condition of a foreign body. The observation of this phenomenon has led by a beautiful induction to the employment of the simplest, safest, and surest means of bringing on labour, by imitating the process of nature and producing an artificial separation of the membranes from the interior of the uterus in those cases, where, to save the life of the child and to lessen the mother's risk, it is found needful to induce the labour prematurely.

ATTITUDE AND POSITION OF THE CHILD IN UTERO.

The interesting questions regarding the Position of the child in utero, as to When it is assumed and Why, have, during these thirty years, been matters of earnest investigation, and still are subjects of obstetrical debate. As regards the When, at the beginning of the period there was hardly a dispute. The idea of the ancients that the fœtus maintained a sitting posture, with its pelvis at the os uteri, up till the end of the seventh month, when it made a sudden somersault which exactly reversed its position, was remembered and related only to be ridiculed. For the opinion of Smellie and Solayrès de Renhac had for a century prevailed, and it was regarded as a settled matter that the fœtus all along was in the same position in which it was found when labour supervened. But some twenty years ago a German obstetrician pointed out, that though the ancients had been in error as to the constancy and suddenness of the movement, yet that in many cases, in a manner more gradual, such change of posture might and did occur; and since then the careful multiplied investigations of his fellow-countrymen have proved beyond a question that not only in the earlier months, but even in the last weeks of pregnancy, changes do occur—footling or transverse changing into cranial presentations, and cranial presentations changing into these less favourable ones, in more than the half of the women that have been examined. As to the Why, opinions are still greatly divided; and of the latest theory that has been started within the last few years to explain it—viz., that it is dependent on the changes in the fœtal circulation—one can only say it is

more unsatisfactory than some of the theories it was intended to replace; and the old Aristotelian theory is gaining ground, that the peculiar attitude is mainly due to the effects of gravitation, the head becoming lowest because of its greater gravity.

PROPOSAL FOR COMMON TERMINOLOGY.

I trust the day is near at hand when a great impulse will be given to the better understanding of the different positions and presentations of the fœtus by the adoption throughout the various nations and schools of a common Terminology. Whilst German statesmen are nearing the goal of national unification, it is cheering to see their men of science making proposals to agree upon some properly descriptive designations which should be used by all obstetric teachers and authorities. Let us cordially wish them all success; and let us hope that they may be induced to admit into their federation some representatives from other lands as well; for up till this hour obstetric writers are not agreed so far as to have settled what point of the fœtal skull all ought to understand when speaking of the *vertex*.

MECHANISM OF PARTURITION.

The Mechanism of Parturition, or the position which the child occupies in relation to the maternal parts and passages during the course of labour, has been studied likewise with increasing diligence. And here, again, views that were almost universally accepted thirty years ago have come to be questioned and subjected to a scrutiny which has caused them to be greatly modified. It were too long to enter now into any of the details which will have to occupy our attention by and by. Let me merely remark that the teaching of the illustrious Naegele, whose ideas have stamped their impress so deeply on the modern expositions of the subject that they are still reproduced almost in their entirety in some of our most recent text-books of midwifery, have been proved to be in several respects erroneous. With regard to the position which the head occupies at the very commencement of natural labour, *e.g.*, Naegele taught that it entered the pelvis obliquely to the plane of the pelvic brim, with the neck flexed slightly towards the left shoulder, so that the right side of the head lay at a lower level, and the right parietal bone presented and projected into the pelvic cavity further than the left. It was believed that this obliquity favoured and facilitated the passage of the head into and through the pelvis, and many an admiring sentence has been written regarding the beauty of the mechanism. Yet it has been shown of late years to be altogether a mistake; and any one may satisfy himself of the truthfulness of the description bequeathed to us by Smellie long ago, who represents the head as entering with the vertex foremost and in a plane parallel with that of the pelvic brim. For often and often we shall have to notice how the advance of our science seems to bring us to the very point where some of the great men of former days have stood. Only we

stand there now with surer footing than they could do, having learnt how the position could be lost, and knowing better in what new direction our forward march could next be safely made.

MANAGEMENT OF LABOUR—ANÆSTHESIA.

If our understanding of the phenomena of labour has been and daily is becoming more correct and clear, so in the management of the parturient and puerperal female our treatment has become more simple and more satisfactory. For the vast improvements that have been effected in general hygiene have been brought to bear on our department also; and by the measures used either for the prevention of diseases or for their remedy, she is placed in a position far more favourable for her safe delivery. The manner of the general improvement here may be expressed in a sentence by saying that the treatment of lying-in women is coming to be guided less and less by artificial formulæ, and more in accordance with the laws of nature. But one mighty revolution in the treatment of the parturient female which our period has witnessed I cannot overlook—a revolution that will make the epoch memorable throughout all time. For during it a brilliant genius conceived the benign idea that woman should be spared her travail-pangs, and a brave spirit searched and found for her the means whereby her sorest of mortal agony could be safely, surely stilled—a boon for which suffering women will not cease to love and honour our profession until the day when He shall come, who comes to hush for ever all creation's groans.

LABORIOUS LABOUR.

When we pass from the subject of natural labour to study the cases where from various causes it becomes more dangerous and deadly, we observe that a growing attention has been directed, and with fruitful result, to the consideration of the three elements which are always present in a case of labour, viz., the body which has to be expelled, the canal or cavity through which it has to pass, and the powers employed in its expulsion.

With regard to the first of these—the Fœtus or body to be passed—most interesting observations have been made of the highest practical importance, bearing on the mortality which arises from slight deviations in its size. Nothing could well bring before our view more clearly the exact adjustment between the dimensions of the body and the calibre of the canal it has to traverse, than the statistics that have been collected to demonstrate the difference of the fatality of labour, both to mother and offspring, according as the child is male or female. The difference in size between the heads of boys at birth and the heads of girls is very slight, amounting only to $\frac{3}{8}$ths of an inch in circumference—just such a difference as might be produced by enclosing the head in a single fold of a table napkin. Yet so nicely is the size of the fœtal head adapted to the capacity of the pelvic canal, that this slight difference is enough to

make the birth of the male more than twice as fatal to the mother as the birth of the female infant; for of the children of 154 women who died of childbirth in the Dublin Hospital during Dr Collins's mastership, 105 were males and only 49 were females; and whilst the proportion of dead to living children among these boys was as 95 to 100, the relative mortality among the girls was only as 48 to 100. This increase in the difficulty of labour from the slight increase in size of the fœtal head is equally striking when we look at operative cases. Thus it is noted that of 200 forceps cases delivered in the Munich Maternity, 125 were boys and only 75 were girls. The children, that is to say, required the use of forceps for their delivery in a proportion of 166 males to 100 females, and this great divergence from the usual proportion of 106 to 100 is solely due to the mechanical hindrances produced by the greater size of the male infant's head. The increase of mortality likewise attendant upon everything that adds to the bulk of the child, or that leads it to present any other than its smallest diameter to the calibre of the canal through which it passes, has become more distinctly defined. Observations have been multiplied regarding the various forms of enlargement of the fœtus, as from tumours of its organs or fluid collections in its cavities, premature ossification of its cranial bones, and the diversified groups of monsters; while the injurious effects of the abnormal presentations of the child, when some part of the trunk or the extremities is found at the beginning of labour taking the place of the head, or when the head itself presents in some unusual position, or when an arm comes down along with it, or gets below the chin so as to prevent its flexion, or gets folded behind the occiput to become itself the obstructing cause—the influence of all these has been more clearly elucidated, and the existence of some of them for the first time recognised. And the result of all is that obstetricians understand better in *what* cases they must interfere, and *when* they may apply their aid with best effect; and it could hardly happen that such teaching could be found in any text-book written in 1870 as may be found in a text-book written in 1840 by a distinguished London practitioner and Professor of Obstetrics, who, in treating of those cases where the head presents with the face directed forwards, speaks of it as a dangerous condition, in which we may require to have recourse to turning, or to rectification, or to the use of the forceps or the lever, or even finally to the destruction of the fœtal head by means of craniotony: nearly the whole round of obstetrical operations being thus recommended under circumstances where unaided nature is competent almost invariably to terminate delivery with the utmost safety.

Again, labour may become abnormal in consequence of some deviation in the diameters of the Canals through which the fœtus has to pass. Sometimes the diminution of the calibre results from morbid conditions of the soft parts, which the improved means of diagnosis enable practitioners now to recognise with a degree of

certainty unknown in former days. The obstruction caused, *e.g.*, by a cystic tumour of the ovary will be at once recognised and remedied by the introduction into it of an exploring needle, whilst, if the obstructing body be solid, the same kind of exploration would reveal its nature and show the need of some operative interference to effect the delivery. Much more frequently, however, the contraction depends on some change in the configuration of the bony canal; and the study of these deformities of the pelvis during the last thirty years has resulted in the scientific arrangement of them in definite groups resembling the genera of a natural order of plants, in which account is taken not only of their ultimate form, but of the manner in which the modification has been brought about. Nor is it merely in a scientific point of view that the study of the natural history of the varieties of the pelvis has been productive of good results; but the gain in a practical point of view could hardly be overestimated. For the more correct our appreciation of the influence exerted by the different pelvic malformations on the position of the fœtus before, and still more during the progress of, labour, the more clear will be our understanding of the difficulties of any special case, and the better shall we know how far to trust to nature to complete it, and when to interfere according to the method most conducive to the safety of the mother and the child.

When we turn to the third element in parturition, we find that the Powers engaged in the Expulsion of the fœtus have likewise been the subject of fruitful investigation, both in their physiological and pathological relations. Their ordinary force has been approximatively measured, and the morbid conditions that bring about their failure have been more accurately noted; and whilst the resources of the materia medica have been laid under contribution for various remedies to increase the vigour of the uterine contractions, mechanics has sought to supplement their deficiency by applying a systematic pressure which can be regulated according to the requirements of any special case, so as to expedite the labour, and save the patient's strength.

OBSTETRIC OPERATIONS.

If we cannot point to any new kind of operative procedure introduced during these years for effecting the delivery of children where the mother's powers have failed, yet there is not one of all those at our command which has not undergone important modifications and immense improvements. Some instruments, such as the Lever and the Fillet, have fallen greatly into the back ground, and that mainly because of the great improvement effected in the construction of the instrument as an alternative for which these were principally employed, viz., the Forceps. The construction of this instrument has been so much improved that it may be regarded as almost perfected; and though individual accoucheurs may still make slight modifications adapted to particular conditions, yet an instrument is already

in the hands of the profession admirably adapted to fulfil all the indications required in a pair of forceps; and it is no small boon to the general practitioner to find that a single pair suffices to do the work both of the long and the short forceps of other days, and that his hand gets familiar with an instrument which can be used either to grasp the head above the brim, or to extract it from the outlet. What forceps *can* do, what they *should* do, and how and when they should be employed, are all questions that have been more carefully investigated and have received more definite replies.

The advances in connexion with the operation of Turning are, if possible, more striking still, both as regards the manner in which the operation is effected and the kind of cases in which it may be advantageously resorted to. It is, for example, a mighty improvement in carrying out the operation to have learned to turn the child in the uterine cavity, whilst the membranes are still unbroken, by a combined external and internal manipulation; and it is a mighty advance in conservative obstetrics to have learned in certain cases of contracted brim to substitute this comparatively safe procedure for one bringing to the mother greater danger and to the child inevitable death.

In these cases, so trying always to the practitioner, in which it becomes necessary for the saving of the mother's life to diminish the head of the child by an operation which of necessity entails its death, he can now at least apply his art with a degree of ease to himself and safety to the woman, which in former days could not have been attained. It has been shown more definitely where the chief obstruction lies, viz., in the firm unyielding base of the skull; and whereas formerly efforts were expended in the breaking down and removal of the vault of the cranium, the practitioner now exerts his powers to more purpose in diminishing the base. There is a preparation in the Obstetrical Museum of this University of the remains of the skull of a child which was delivered by Dr James Hamilton, who occupied this chair during the first forty years of the century. The arch of the cranium had been broken down and removed bit by bit till only the base was left; but as it is precisely here that the difficulty lies, we do not wonder to hear Dr Hamilton relate how, after having opened the head of the infant one midnight, he proceeded between nine and ten o'clock next morning to the extraction, and was kept hard at work for upwards of four hours, till at last he "was literally obliged, from exhaustion, to be carried home in a sedan-chair at half-past two in the afternoon." The improvements that have been effected in the Craniotomy instruments, and above all in the Cephalotribe, give us the assurance that such a scene is not likely to be again enacted.

Without stopping to refer further to the means of inducing Premature Labour, and the various improved methods of dilating the passages where there is a call for their rapid dilatation, let me pass on to observe, that in regard to the very alarming complication of

labour which arises from abnormal implantations of the Placenta, great advance has recently been made both as to our views of its nature and its treatment. For the limits between the zones of safe and dangerous attachment of the placenta have been carefully defined, the source of the dangerous hæmorrhage has been more accurately determined, and thus the measures employed to counteract it can now be applied with a greater degree of precision and with a more satisfactory result. And I must not forget to note the happy addition that has been made to our means of effecting the Reposition of the Umbilical Cord in cases of labour complicated by its prolapse—an addition which we owe to transatlantic ingenuity, and which consists simply in altering the position of the patient, so as to bring the fundus uteri to a lower level than the cervix, in order that the displaced cord may fall back into its cavity and lie there till the head be driven down into the pelvic space.

PUERPERAL DISEASES.

When we come to consider the diseases to which women are specially liable subsequent to parturition, we find that the contagiousness of Puerperal Fever has been established, and the Hospitalism and other conditions which favour its development have been better ascertained. Many observations have been made regarding Puerperal Mania which help us to explain its causes and to anticipate its course. The pathology of Phlegmasia dolens has been greatly cleared up. And, finally, many cases of sudden death occurring after labour have been shorn of their mystery since we have learned to see how the peculiar condition of a puerperal woman's blood should make her specially liable to coagulations and Embolisms in the larger bloodvessels.

DISEASES OF WOMEN.

When we turn from Obstetrics to the consideration of the Diseases of Women, we find that in this other great department of our course the advance has been no less amazing. It is only during these thirty years, indeed, that Gynækology has begun to assert its due importance among the other departments of medicine, and that men of the highest standing in the profession have devoted themselves to it as their specialty, whilst its progress has been greatly furthered by the formation in various cities of influential societies, which have been established for the very purpose of discussing and developing Obstetrics and Gynækology, one of the first of which was instituted here in the year 1840.

UTERINE DIAGNOSIS.

It is, first of all, in regard to our means of investigating this special class of diseases that the most striking improvement has been made. If we look back to one of the few and rather meagre treatises of those days on the subject of uterine disease, we shall find the author relying for diagnosis, apart from the general symp-

toms, only on a tactile examination, internal and external, and a visual exploration by the speculum. That Auscultation should not sooner have been employed in the diagnosis of the various tumours of the pelvic organs is hardly to be wondered at, when we remember the little value that was attributed to its use in the diagnosis even of pregnancy by such men as Dr Hamilton. In the last edition of his "Practical Observations on various Subjects relating to Midwifery," given to the public in 1840, after having undergone careful revision by the author shortly before his death, he records it as his opinion, "that admitting that, by the application of the stethoscope to the surface of the abdomen of a pregnant woman, a peculiar sound (called placental souffle) is heard, and that another sound, supposed to be that of the fœtal heart, is also perceived, he is convinced that few cases can occur in actual practice where this test can be required, or can be applied" (p. 102). But as the instrument has come to be more and more employed in the investigation of abdominal enlargements, it has been found to afford a valuable positive mark of distinction between uterine and ovarian tumours; and even in those cases where its employment is attended with a negative result, the practitioner who has used it has cleared the ground the more completely for arriving at a perfect diagnosis.

In making a visual examination our means of exploration have received some notable improvements. The Endoscope, for example, has been introduced for explorations of the uterine cavity, and morbid growths that lay beyond the reach of the finger have been brought within the range of vision. And what is more important still, such modifications of the Speculum have been effected as have placed the whole vaginal cavity under our control to a degree which could not be attained by the old-fashioned instruments, whether for purposes of diagnosis or of treatment.

The objects which come within the range of our direct manual or tactile examination have also been much more clearly defined and differentiated, and the results of the Combined External and Internal exploration are laid down now in every work on female diseases with a fulness and precision of which we hardly find a hint in the writings of thirty years ago.

But the most important addition by far that has been made to our means of uterine diagnosis lies in the introduction of an instrument, the employment of which begins exactly at the point where the results of digital exploration become uncertain or fail us altogether. It was not altogether a novelty to pass a probe through the narrow neck of the uterus, for the practice is somewhat vaguely spoken of even in the old Hippocratic writings. But it was not till after 1840, when the profession was wakening up to the immense variety and importance of uterine disorders, that men began fairly to realize the need of systematically exploring the cavity of the uterus, and sought to supplement the data obtained from the touch by the use of a metallic finger or probe which could be passed

into the interior. It is interesting to note that the want was felt alike in Germany, in France, and Britain; and almost simultaneously a leading gynækologist of each of these nations invented an instrument adapted for the purpose, and began to recommend its general employment. But Britain was first in the race, and the Uterine Sound which was first used here is still the one which, with some trifling modifications, is most widely adopted. By means of it we can make out the degree of patency or contraction of the cervical canal; we can accurately measure the length of the uterine cavity, and determine in cases of disease its degree of enlargement or diminution; we can ascertain its precise position and direction, whether it occupy its ordinary place or have undergone some kind of dislocation; we can form some idea of the condition of the lining membrane of the organ; we can discover its degree of fixity or mobility, and its connexion or its non-connexion with uterine or ovarian tumours,—and these are all points regarding which, without the Sound, we must have remained almost or altogether in the dark.

The great impulse given to gynækological pursuits by the introduction of the Sound, led ere long to another invaluable addition to our means of diagnosis. For it became clear that if some means could be discovered of dilating the canal of the cervix to the degree in which it is dilated in some cases of abortion, when it is sufficiently patent to admit the finger, some of the morbid conditions of the cavity would become more distinctly recognisable, and at the same time become more accessible to treatment. Such a means was found in the Sponge-tent, which, being introduced in a dried and compressed state into the narrow cavity, absorbs moisture, swells, and distends the cervix uteri to such a degree that tumours high up within the uterus can now be reached and removed, such as formerly used often to undermine a patient's health, and sometimes bring about her death, without the possibility of our affording any marked relief or applying any remedy.

Another valuable addition to our means of gynækological investigation consists in the introduction of the Exploring Needle. Often and often has this useful instrument enabled the practitioner to decide whether a given tumour was solid or fluid, where the most erudite touch must have hesitated to pronounce upon it; and where the swelling was felt clearly enough to be cystic, the insertion of the little tube has revealed to him the nature of its contents by bringing some of the fluid before his eye, when he could call in the aid of chemistry or the microscope to correct or confirm his diagnosis.

For I ought to add that Chemical analysis, by showing us the difference between various fluids, enables us to distinguish an inflammatory effusion from the secretion, *e.g.*, in an ovarian cyst; whilst for the ascertaining of the nature of many morbid products, both fluid and solid, the Microscope alone affords the necessary data.

Nor can we here forget the great assistance which we often find from the use of Anæsthetics in our investigations into cases of uterine

disorder. In those instanees of supersensibility where the slightest touch produces exquisite distress, unless we first put the patient to sleep all examination would be utterly impossible, and all attempt at cure would be but a random effort. At other times we require to have the patient anæsthetized and the museles all relaxed, in order to obtain the full result of our palpation; and gynækologists are now familiar with a eurious class of cases, where the patient believes herself to be the subjeet of a tumour or other abdominal enlargement, and where the use of ehloroform reveals at once the nature of the ease, the swelling gradually subsiding as the patient falls asleep, and the tumour proved to have been nothing but a phantom of her brain.

THE TREATMENT OF UTERINE DISEASES.

It is an unspeakable eomfort to have aequired the means of making a diagnosis oftentimes so certain that we ean lift from a woman's heart a heavy load of dark foreboding fears, and send her away rejoieing that it is no longer the sentenee of death she earries within her, but the cheering hope of a new young life. Yet it is not in the way of adding to our Diagnostic methods only that progress has been made,—our means of *Treatment* have been equally improved.

Whilst some of the Flexions of the uterus, *e.g.*, ean only be satisfaetorily made out by the use of the sound, the very means that enable us to recognise, enable us also to reetify them; and vast ingenuity has been expended, and often with the happiest results, in devising various appliances for maintaining the organ in its proper plaee, or mitigating the evils of its dislocation. Side by side with the progress that has been made in our acquaintanee with the mechanical means best adapted for the remedy or relief of these disorders, great advanee has been also made in our appreeiation of the efficaey of antiphlogistic and other measures in appropriate cases. These two lines of advanee have been oeeupied, sometimes too exclusively, by two different groups of gynækologists, who have seemed oeeasionally to assume antagonistie attitudes. But in reality the one has never been able to dispense with the assistanee of the other. They of the so-ealled meehanical sehool have ever and anon found themselves in presenee of special eases and vital eonditions where meehanieal measures eould not be tolerated; and their rivals, on the other hand, have not been so unwise as to diseard all aid of properly-adjusted instruments. Otherwise, it were as if, on the one hand, the Crown Prinee of Prussia had led his army into a hostile eountry, eonfiding only in the long range and the eertain aim of the needle-gun, and eareless of the eondition of his eommissariat; or as if, on the other, his eousin were to have led his battalions to the field well fed, well found in everything but rifles. So he who would attempt to treat female disorders regardless of the lessons to be learned in one or other of these sehools, must go to his work either with a palsied arm or a powerless weapon; for the progress of eaeh has led to eommon gain, the good result of which is seen in the

restored health and usefulness of women who had else been left as helpless, hopeless invalids.

With regard to that very frequent form of uterine disease, where morbid growths of a non-malignant kind are developed in the walls of the organ, we find their pathological anatomy now made out; and whilst their diagnosis can be more accurately determined, their general course and tendency is better understood, so that in most instances we can speak with much assurance as to the prognosis of the case. According as these Fibroid Tumours lie immediately beneath the peritoneal covering, or are embedded in the wall of the uterus, or project into the interior of its cavity, we know better how to apply our means of cure—when to leave them to the beneficial influence of various mineral springs, or the salts with which these are impregnated; or to adopt various measures to relieve the symptoms they excite; or, finally, to have recourse to various operative procedures which tax all our skill and patience, but which often have the happy issue of saving our patient's life and restoring her to health.

I have spoken of the normal anatomy and physiology of the Ovary. Its morbid anatomy has been the subject of research no less interesting and instructive; whilst our powers of distinguishing ovarian tumours have been greatly heightened. But it is with regard to the treatment of it that the most important advance has been achieved. The extirpation of these tumours was not a novel operation. It had already been performed in several cases in the beginning of the century by Dr Ephraim M'Dowell of Kentucky; but in the hands of the only European surgeon who had attempted it, the operation had not been attended with encouraging results; so that Dr Hamilton says, "It is to be presumed that no British surgeon in future will venture upon such an experiment." The leading surgeons and gynækologists of the day were of the same opinion; yet some who believed the operation to be not only justifiable, but in some instances commendable, began to express their ideas and to carry them into practice. And inch by inch the field has been fought, till now the opposition to Ovariotomy has not only died away, but it is reckoned among the most satisfactory of surgical operations, and the many women who have been rescued by it from disease and death are counted among the proudest trophies of modern surgery.

Vesico-vaginal Fistula, though not so fatal, was looked upon with even a greater degree of hopelessness. Dismal, depressing cases for the heart of the surgeon they were,—those women in whom an opening had formed between the bladder and vagina, so that the constant escape of urine made them miserable in themselves, and objects of pity and almost of loathing to all around them,—for closure of the fistula could hardly ever be effected, and had almost ceased to be attempted. It was a happy day for us, as well as for these poor patients, when news came from across the Atlantic that one of the great gynækologists of America had found the means of closing up these fistulæ by using silver sutures. Many a woman who had been sent away heavy-hearted by her almost as sorrowful doctor to eke out

a dreary existence in perpetual distress, was now gladly recalled, to be subjected to an operation which restored her to the enjoyment of health and comfort; for the introduction of the use of metallic sutures has enabled us to attempt the cure of these troublesome cases with almost absolute certainty; and not only these, but all the lacerations and perforations of the pelvic parts and passages have, in a far greater degree than formerly, become subject to our control.

I might speak of yet other maladies peculiar to the female which have first begun to attract special attention in recent years, or of which the pathological nature has only begun to be understood, or I might treat of various diseases where we may not be able to interfere with such satisfactory results as in the instances I have referred to, but where we can moderate the rapidity of its course and mitigate the severity of its consequences—in which we have got large additions to our palliative measures, though we have not yet discovered a means of perfect cure. But I must hasten to a close.

If I pass over the third great division of our course, without entering into any detail in regard to the progress made in it also, it is not because the Diseases of Children have been neglected during these active years. The rise of hospitals for sick children in various centres of civilization, the publication of many books on the diseases of children in general, and of many monographs on special maladies, and the establishment of journals devoted to the discussion of pædiatric questions, all tell in tones that cannot be mistaken how deeply physicians have been interesting themselves in all that relates to the management of infants, the prevention and the cure of infantile disease. The results of their earnest efforts I hope to set before you at the proper time. But now I must draw to a close.

IN MEMORIAM.

I have not named any of the distinguished men to whose talents and industry we owe all these achievements. I have not attempted the invidious task of sitting on a judgment-seat to portion out to each his meed of praise. I have not pointed out to you the lights in our obstetric firmament, and sought to settle which are stars of first and which of lesser magnitude, but rather to the light which they have shed to guide us in our path. For I have been anxious that you might begin at once to see with what an interest our subject is invested, and what a wide and worthy field it will afford for the exercise of all your best intelligence and all your earnest industry.

Yet all the while one name has been before your minds. It cannot ever be that the Midwifery class can meet in this University without remembering the name of Sir James Young Simpson. It is written too broadly for that on the page which the student of our science has to read; it is engraven too deeply on the weapons which the practitioner of our art must wield. It shines with the light of a star of the greatest magnitude. We would not coldly estimate its brightness; we could not calmly measure its proportions. We

stand too near him yet. We feel too keenly still our overwhelming sense of a great, unspeakable, irreparable loss. These college scenes look unfamiliar now that he, who for a generation was so great, so bright a part of them, comes back to them no more. My heart would fail me if I tried to speak of how we miss him in the circle of his friends. He is missed by the throngs of patients that were gladdened by his kindness, and got healing through his skill. He is missed by fellow-practitioners, who could always count on his ready aid, and who felt that, when their own resources failed, they might yet rely on his. Philanthropists of every kind miss one of the most willing-hearted, able-handed of their number. And, Gentlemen, you miss him too. When you began your medical curriculum, you not unnaturally expected that when your time had come to study Midwifery you would have had the privilege of sitting at the feet of its great master. You hoped to have come under the invigorating influence of his mighty intellect, to have listened to the eloquence and wisdom of his oral teaching, to have learned at his own hands the most successful means of practice, and to have your enthusiasm kindled by that inspiring zeal of his which had stirred a like professional enthusiasm in many another breast. That cannot be, now that he has been taken from us. But in his writings he has left us a mine of rich experience, and a treasury of pregnant thoughts, whilst in the various instruments which he invented he has bequeathed to us the permanent results of his great ingenuity. Of these let us make faithful use. Let us read the lessons of his life, and profit by his own example. The rare genius may not be ours; in any age there are not many such. But in the unwearied industry which made him still toil on when he had earned good right to rest; in the devotion to his profession which kept him ever aiding and delighting in its progress, seeking to enlarge the limits of its science and to enrich the resources of its art; in the kindly human interest in the objects of his care, which made his patients look on their physician as a friend; in the genial charm of sympathy which gained him such a rich return of love that the tidings of his death carried sorrow to hearts in every quarter of the globe such as when a brother dies; in the real greatness of the man, which kept him always greatly real, genuine, and unassuming; in the childlike faith, which in his later years brought to his heart the peace that passeth understanding, and which led him at last through the valley of the shadow of death, fearing no evil, but speaking with radiant eye of the light that he descried beyond the darkness,—in these we all may follow him. In these may grace be given each of us to follow him, that our own individual path may not be like that of the darkened star whose place in the firmament is only shown by its distracting from its steadfast course some neighbour star, but rather may be as the shining light that shineth more and more unto the perfect day.

EDINBURGH: PRINTED BY OLIVER AND BOYD.